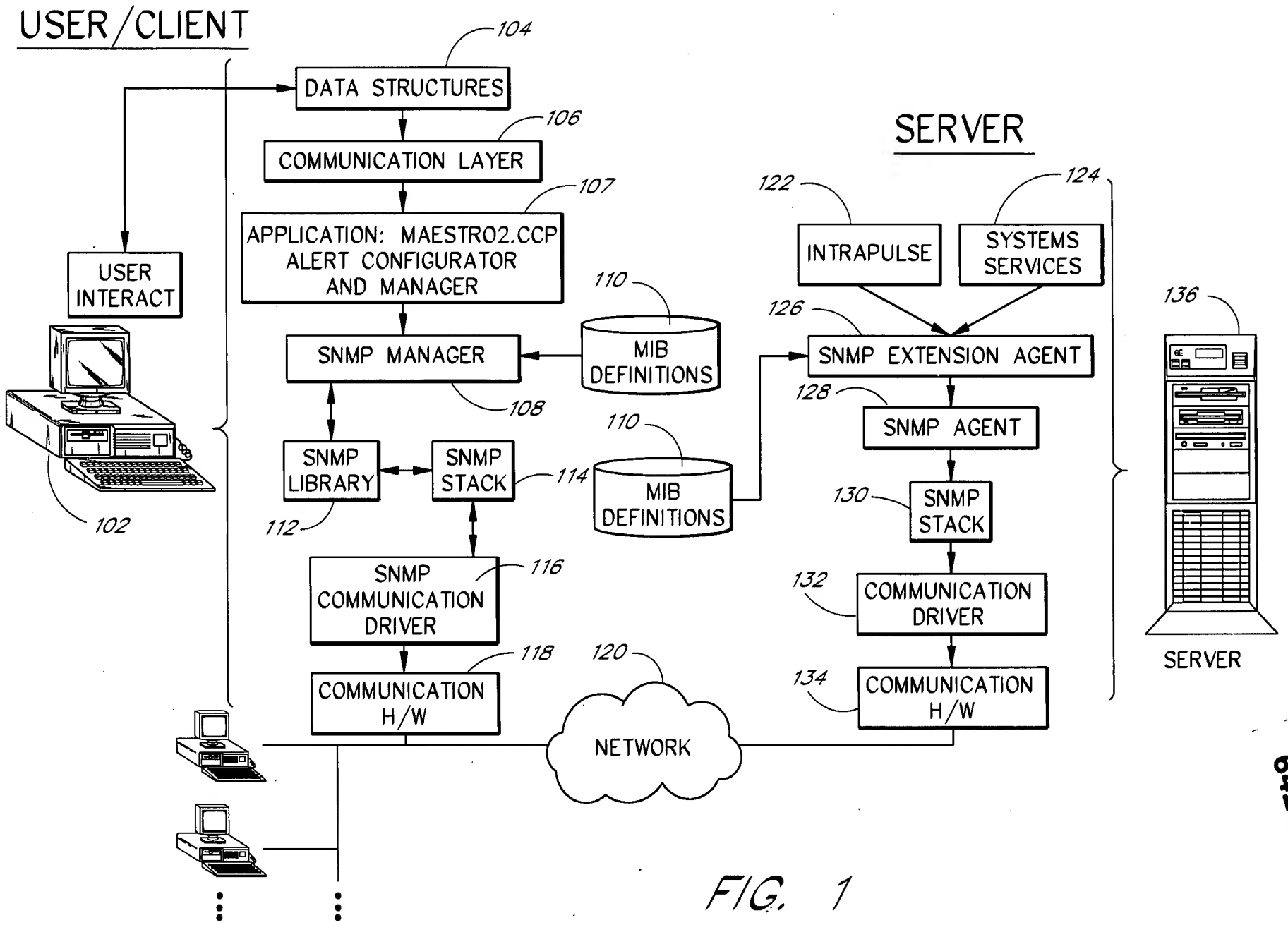
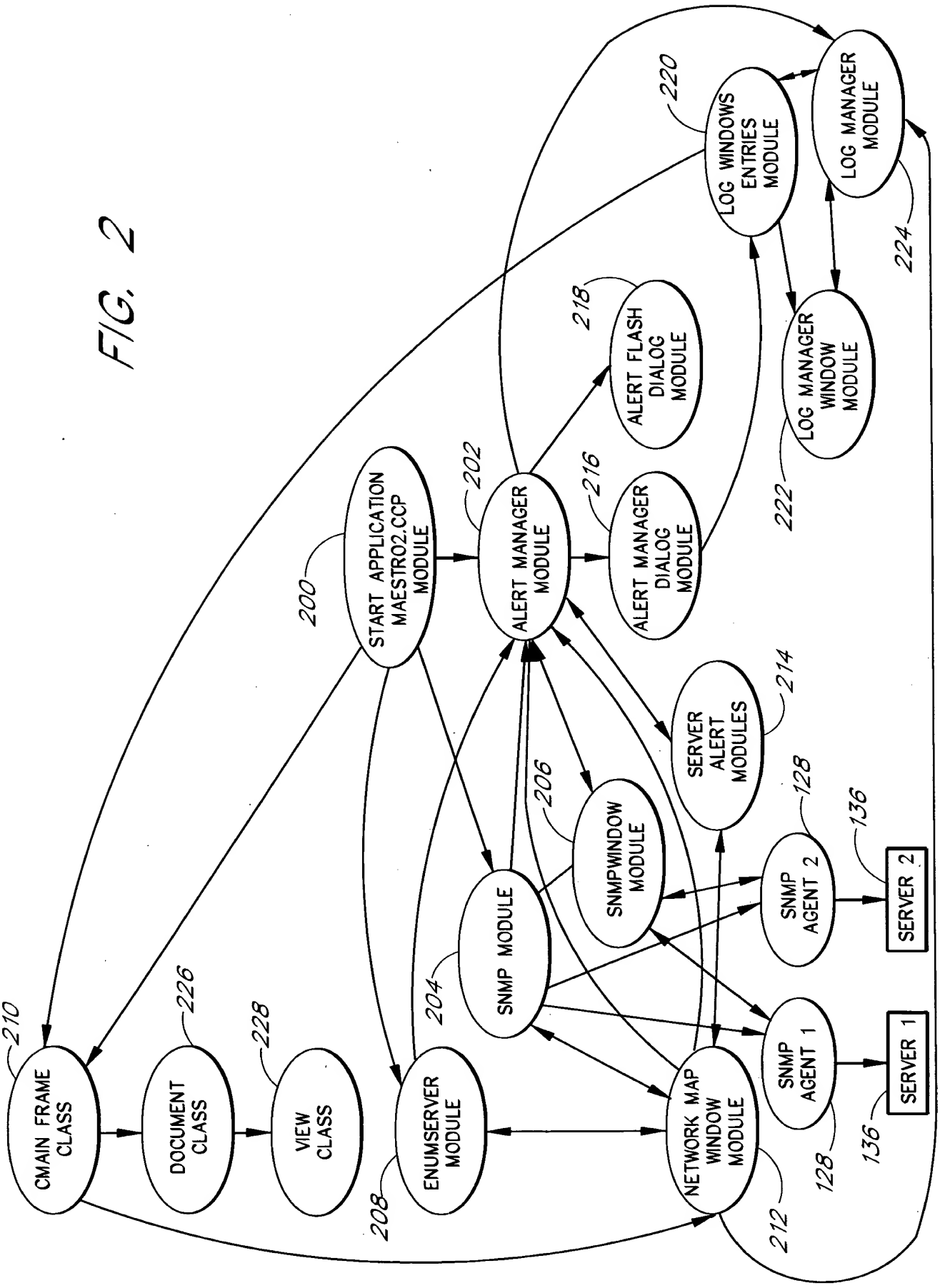


FIG. 1

Title: ALERT CONFIGURATOR AND MANAGER
Inventor(s): Chari et al.
App. No.: 08/942,005

6425006

FIG. 2


CMAIN FRAME CLASS
210
DOCUMENT CLASS
226
VIEW CLASS
228
START APPLICATION MAESTRO2.CCP MODULE
200
ALERT MANAGER MODULE
202
ALERT MANAGER DIALOG MODULE
216
ALERT FLASH DIALOG MODULE
218
LOG WINDOWS ENTRIES MODULE
220
LOG MANAGER MODULE
224
LOG MANAGER WINDOW MODULE
222
SERVER ALERT MODULES
214
SNMP MODULE
204
SNMPWINDOW MODULE
206
ENUMSERVER MODULE
208
NETWORK MAP WINDOW MODULE
212
SNMP AGENT 1
128
SNMP AGENT 2
128
SERVER 1
136
SERVER 2
136

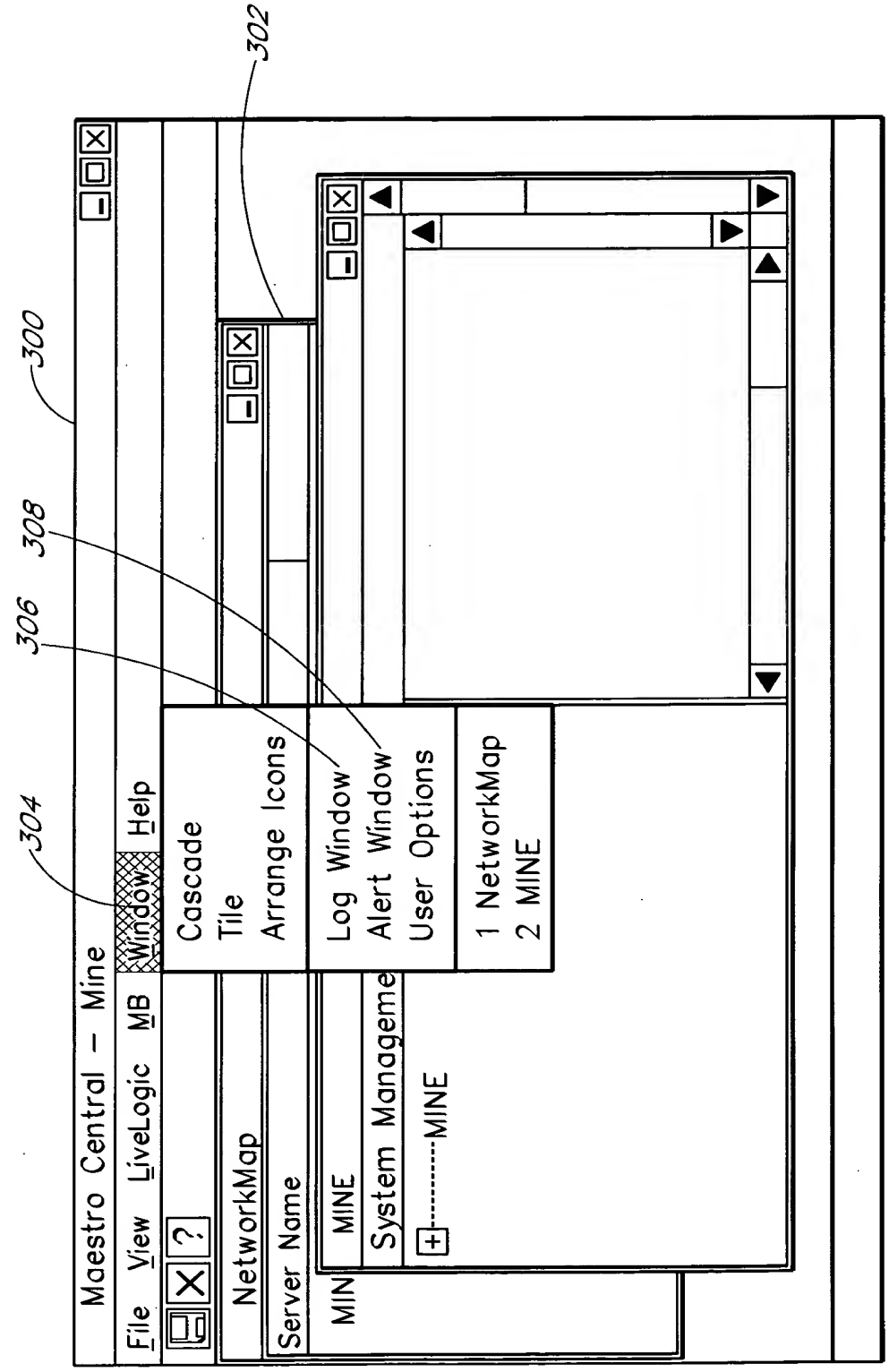

302
300
308
306
304
Maestro Central – Mine
File View LiveLogic MB Window Help
Cascade
Tile
Arrange Icons
Log Window
Alert Window
User Options
1 NetworkMap
2 MINE
NetworkMap
Server Name
MINE
System Manageme
MINE
MIN

FIG. 3

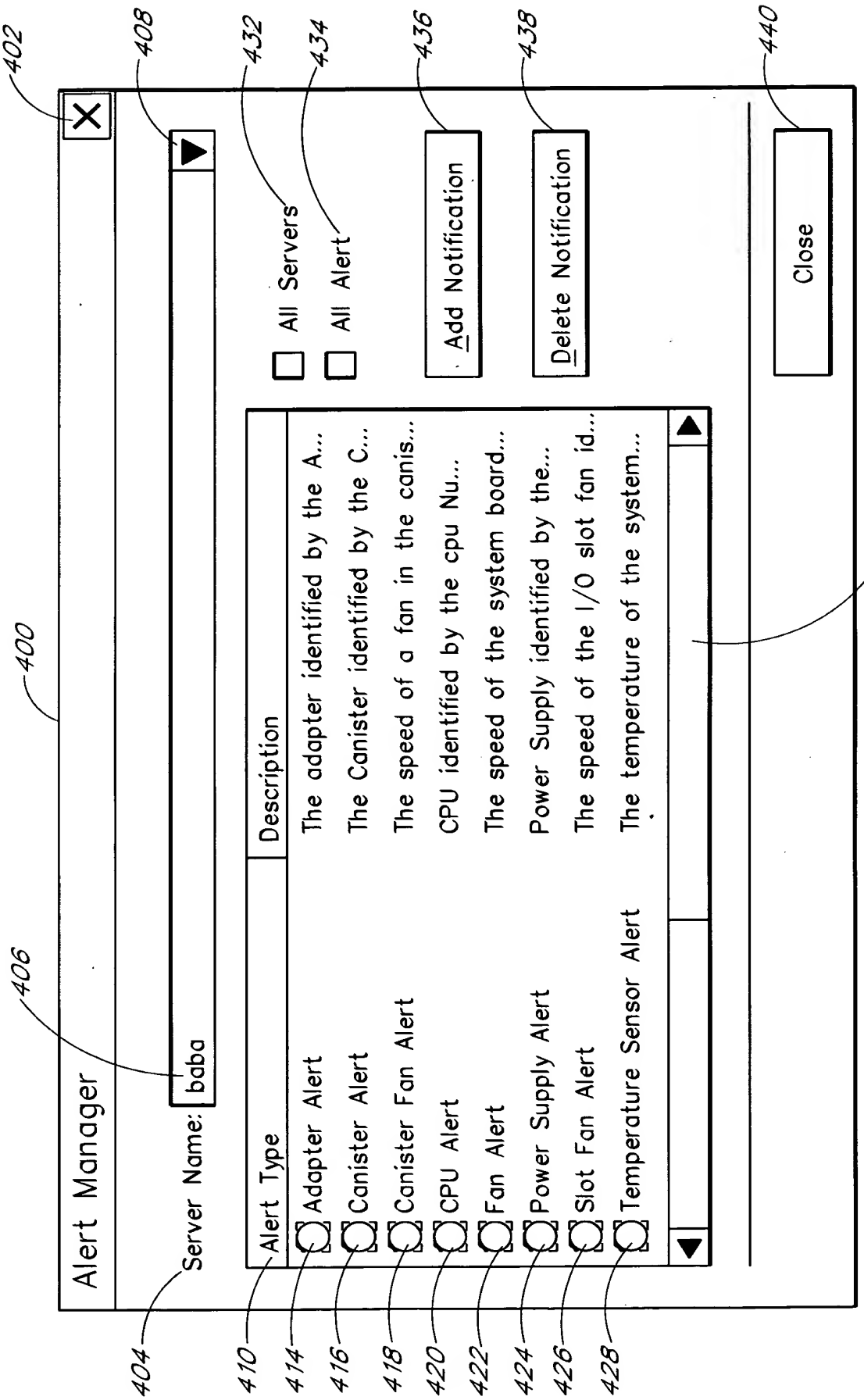

Alert Manager
Server Name:
baba
All Servers
All Alert
Add Notification
Delete Notification
Close
Alert Type
Description
Adapter Alert
The adapter identified by the A...
Canister Alert
The Canister identified by the C...
Canister Fan Alert
The speed of a fan in the canis...
CPU Alert
CPU identified by the cpu Nu...
Fan Alert
The speed of the system board...
Power Supply Alert
Power Supply identified by the...
Slot Fan Alert
The speed of the I/O slot fan id...
Temperature Sensor Alert
The temperature of the system...
400
402
404
406
408
410
414
416
418
420
422
424
426
428
430
432
434
436
438
440

FIG. 4A

ALERT/TYPE	Displayed Description
CPU	CPU identified by the CPU Number failed because of high temperature and/or low power.
SYSTEM BOARD FAN	The speed of the system board fan identified by the Cooling Fan Number has dropped below the minimum limit.
TEMPERATURE SENSOR	The temperature of the system board fan identified by the temperature sensor number has dropped below the minimum limit.
POWER SUPPLY	Power Supply identified by the Power Supply Number has been extracted or inserted or has gone into an abnormal state, please look into the Help file for more detail.
ADAPTER	The adapter identified by the Adapter Number or its driver is malfunctioning.
CANISTER	The Canister identified by the Canister Number has either been extracted or inserted.
SLOT FAN	The speed of the I/O slot fan identified by the Slot Fan Number has dropped below the minimum limit (slotFanMinSpeed).
CANISTER FAN	The speed of a fan in the canister identified by the Canister Number has dropped below the minimum limit.

FIG. 4B

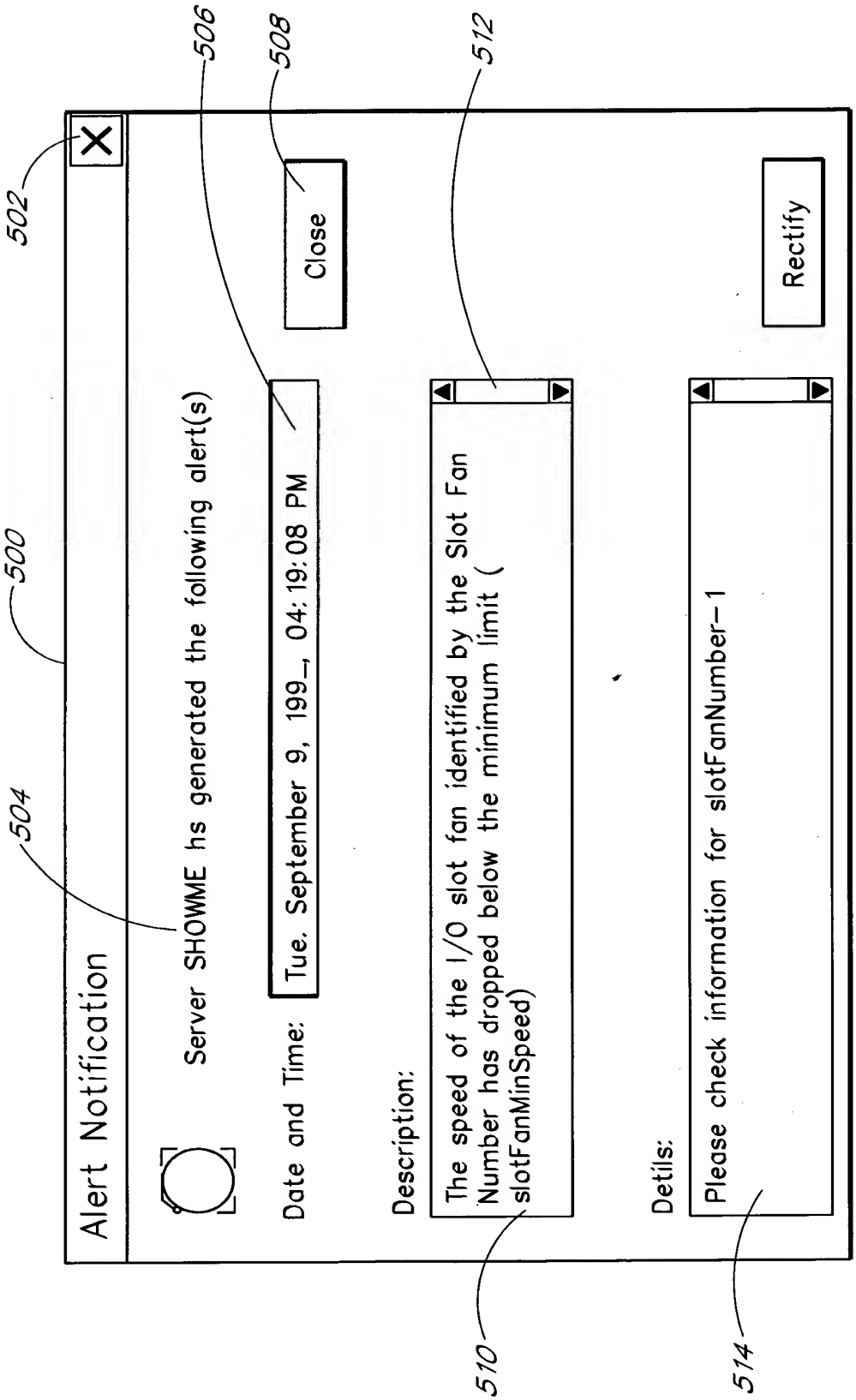

Alert Notification
Server SHOWME hs generated the following alert(s)
Date and Time:
Tue. September 9, 199_, 04:19:08 PM
Description:
The speed of the I/O slot fan identified by the Slot Fan Number has dropped below the minimum limit (slotFanMinSpeed)
Detils:
Please check information for slotFanNumber-1
Close
Rectify
502
504
506
508
510
512
514

FIG. 5

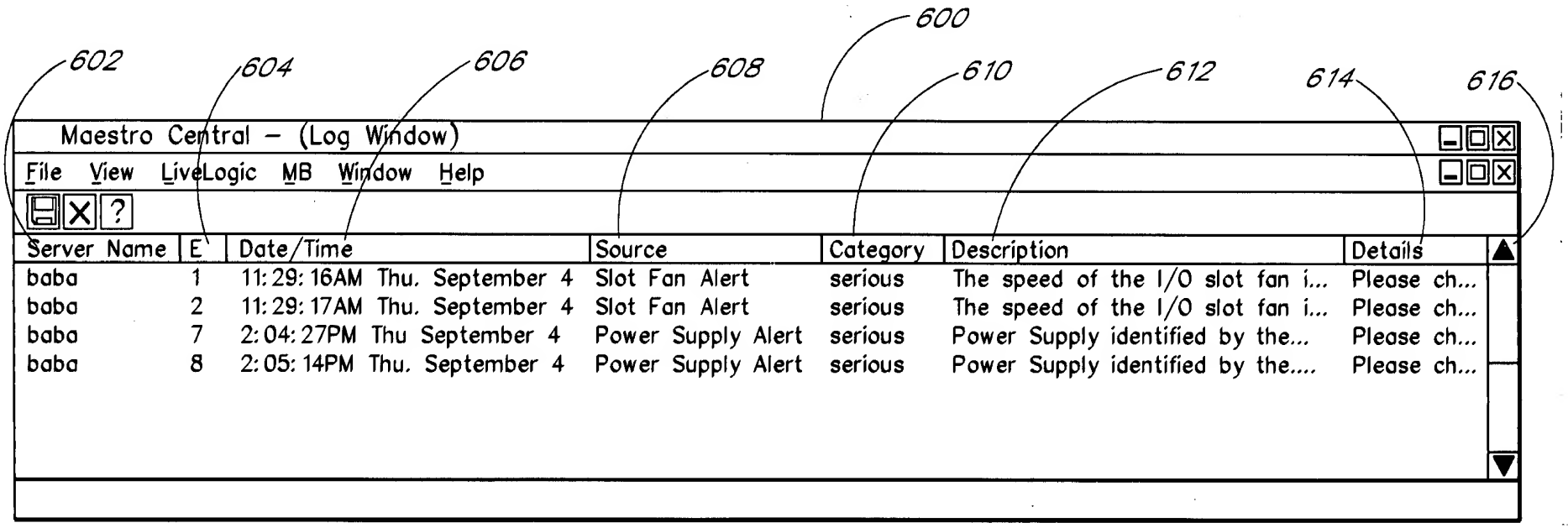


FIG. 6

Title: ALERT CONFIGURATOR AND MANAGER
Inventor(s): Chari et al.
App. No.: 08/942,005

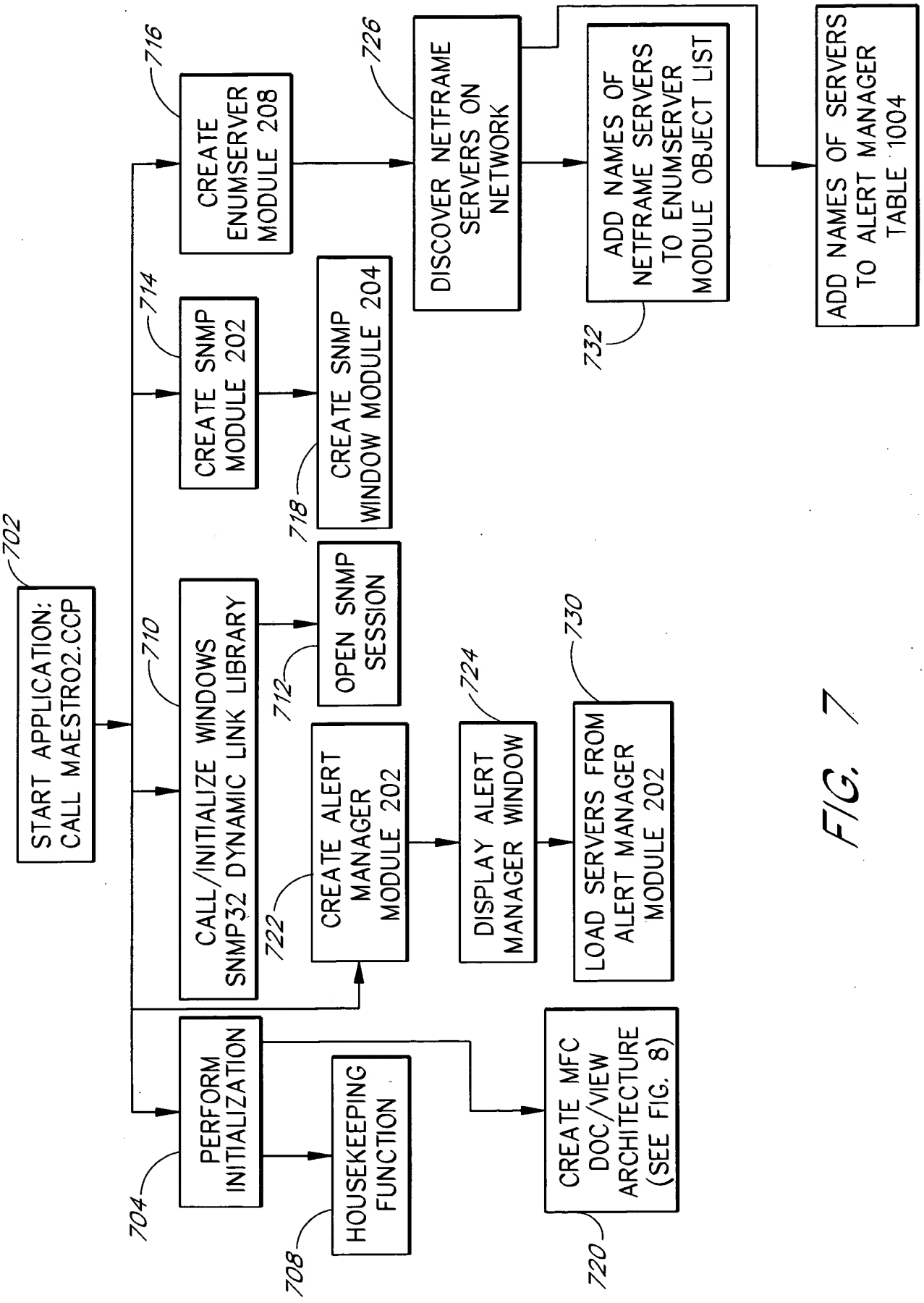

START APPLICATION: CALL MAESTRO2.CCP
702
CALL/INITIALIZE WINDOWS SNMP32 DYNAMIC LINK LIBRARY
710
PERFORM INITIALIZATION
704
HOUSEKEEPING FUNCTION
708
CREATE SNMP MODULE 202
714
CREATE SNMP WINDOW MODULE 204
718
OPEN SNMP SESSION
712
CREATE ALERT MANAGER MODULE 202
722
DISPLAY ALERT MANAGER WINDOW
724
LOAD SERVERS FROM ALERT MANAGER MODULE 202
730
CREATE ENUMSERVER MODULE 208
716
CREATE MFC DOC/VIEW ARCHITECTURE (SEE FIG. 8)
720
DISCOVER NETFRAME SERVERS ON NETWORK
726
ADD NAMES OF NETFRAME SERVERS TO ENUMSERVER MODULE OBJECT LIST
732
ADD NAMES OF SERVERS TO ALERT MANAGER TABLE 1004

FIG. 7

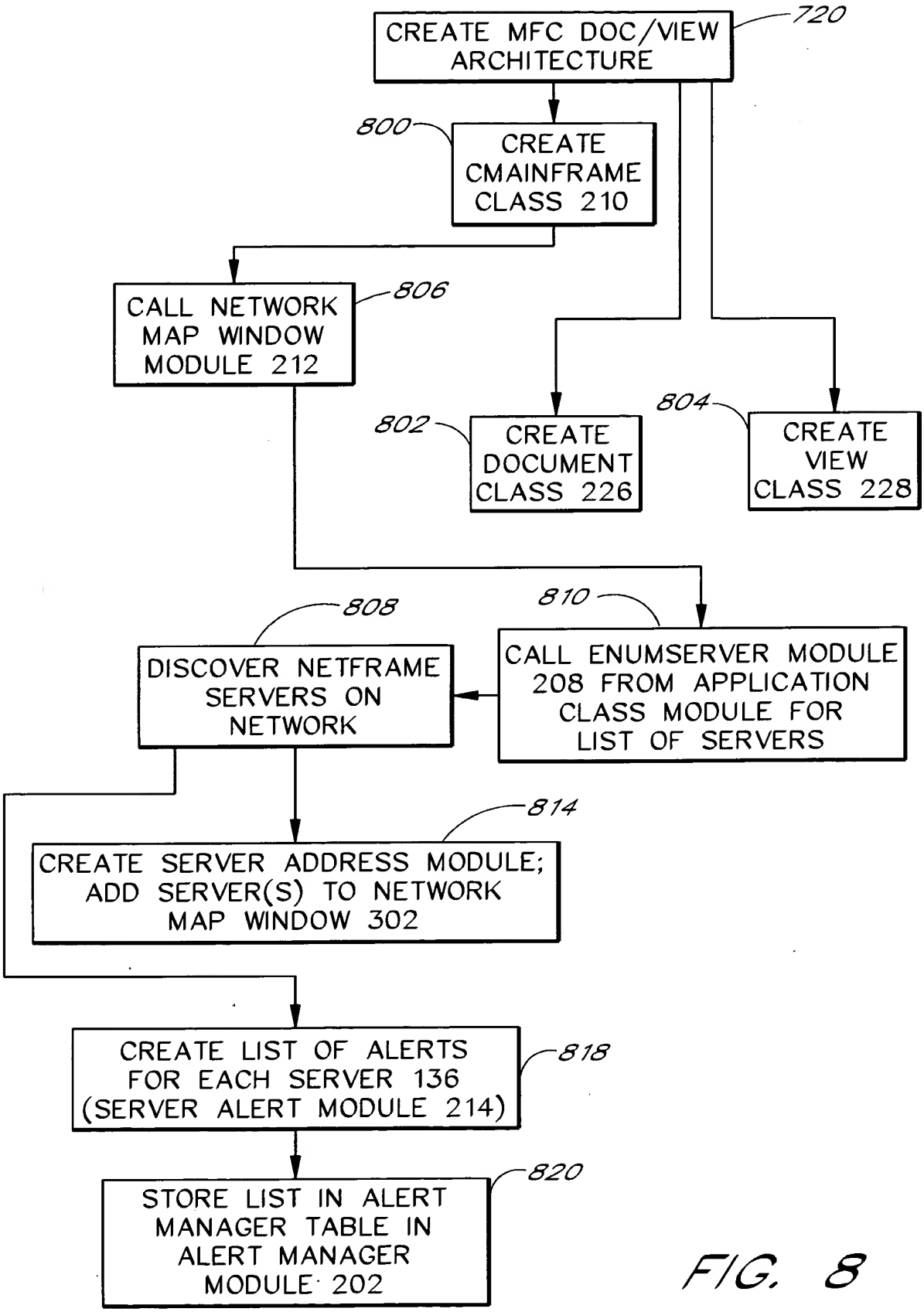

CREATE MFC DOC/VIEW ARCHITECTURE
720
800
CREATE CMAINFRAME CLASS 210
CALL NETWORK MAP WINDOW MODULE 212
806
802
CREATE DOCUMENT CLASS 226
804
CREATE VIEW CLASS 228
808
DISCOVER NETFRAME SERVERS ON NETWORK
810
CALL ENUMSERVER MODULE 208 FROM APPLICATION CLASS MODULE FOR LIST OF SERVERS
814
CREATE SERVER ADDRESS MODULE; ADD SERVER(S) TO NETWORK MAP WINDOW 302
CREATE LIST OF ALERTS FOR EACH SERVER 136 (SERVER ALERT MODULE 214)
818
STORE LIST IN ALERT MANAGER TABLE IN ALERT MANAGER MODULE 202
820

FIG. 8

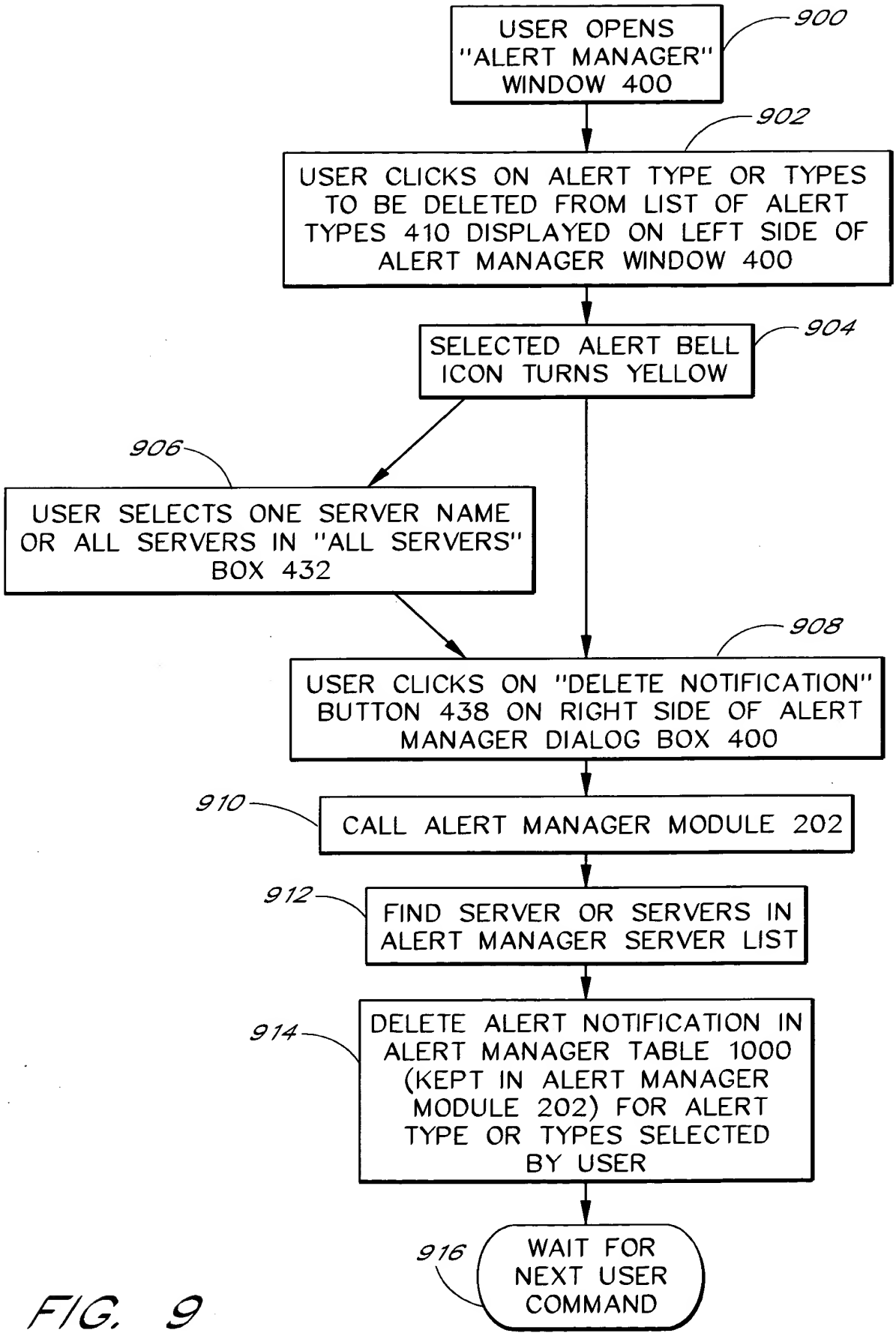

USER OPENS "ALERT MANAGER" WINDOW 400
900
902
USER CLICKS ON ALERT TYPE OR TYPES TO BE DELETED FROM LIST OF ALERT TYPES 410 DISPLAYED ON LEFT SIDE OF ALERT MANAGER WINDOW 400
SELECTED ALERT BELL ICON TURNS YELLOW
904
906
USER SELECTS ONE SERVER NAME OR ALL SERVERS IN "ALL SERVERS" BOX 432
908
USER CLICKS ON "DELETE NOTIFICATION" BUTTON 438 ON RIGHT SIDE OF ALERT MANAGER DIALOG BOX 400
910
CALL ALERT MANAGER MODULE 202
912
FIND SERVER OR SERVERS IN ALERT MANAGER SERVER LIST
914
DELETE ALERT NOTIFICATION IN ALERT MANAGER TABLE 1000 (KEPT IN ALERT MANAGER MODULE 202) FOR ALERT TYPE OR TYPES SELECTED BY USER
916
WAIT FOR NEXT USER COMMAND

FIG. 9

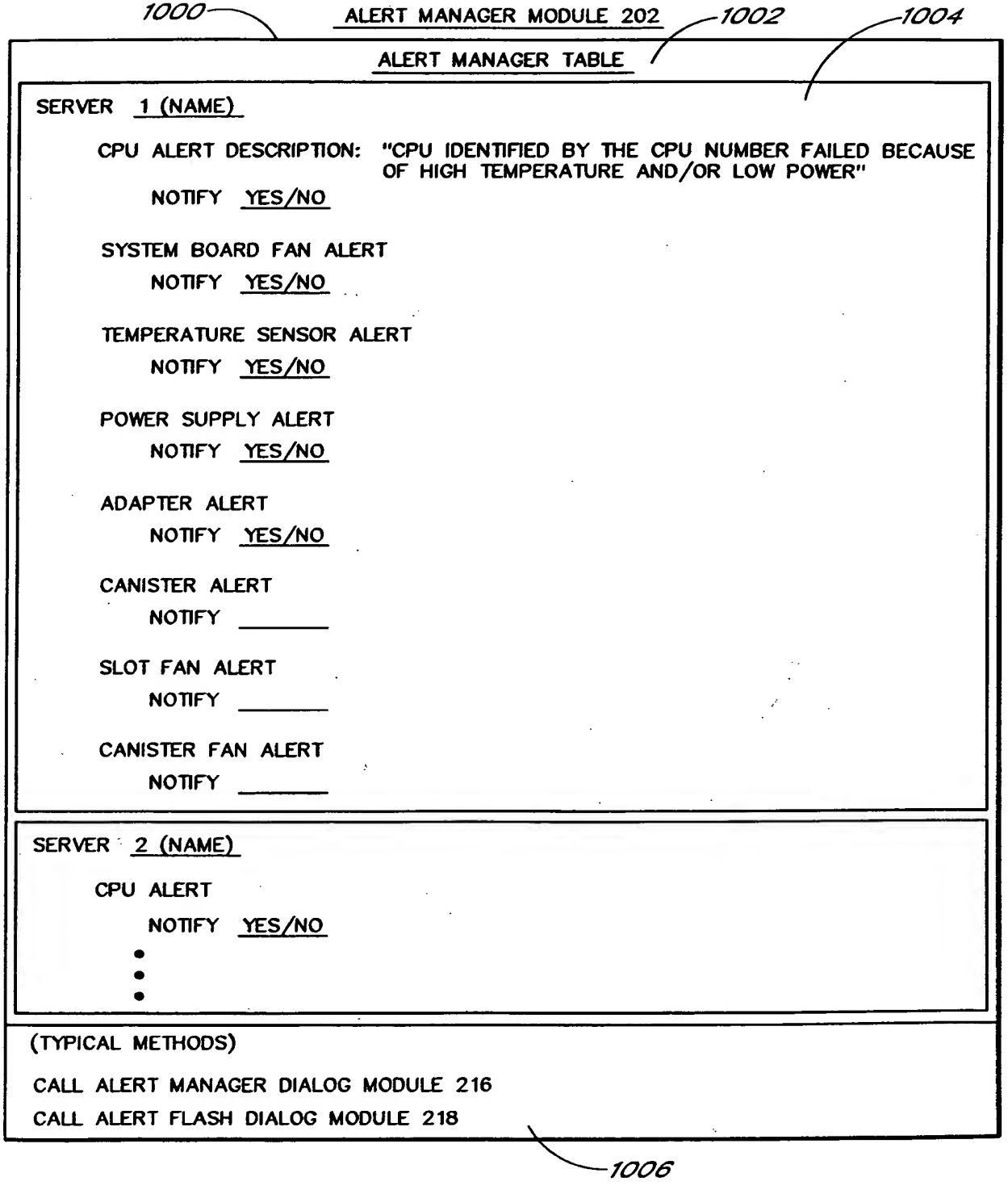

1000
ALERT MANAGER MODULE 202
1002
1004
ALERT MANAGER TABLE
SERVER 1 (NAME)
CPU ALERT DESCRIPTION: "CPU IDENTIFIED BY THE CPU NUMBER FAILED BECAUSE OF HIGH TEMPERATURE AND/OR LOW POWER"
NOTIFY YES/NO
SYSTEM BOARD FAN ALERT
NOTIFY YES/NO
TEMPERATURE SENSOR ALERT
NOTIFY YES/NO
POWER SUPPLY ALERT
NOTIFY YES/NO
ADAPTER ALERT
NOTIFY YES/NO
CANISTER ALERT
NOTIFY
SLOT FAN ALERT
NOTIFY
CANISTER FAN ALERT
NOTIFY
SERVER 2 (NAME)
CPU ALERT
NOTIFY YES/NO
(TYPICAL METHODS)
CALL ALERT MANAGER DIALOG MODULE 216
CALL ALERT FLASH DIALOG MODULE 218
1006

FIG. 10

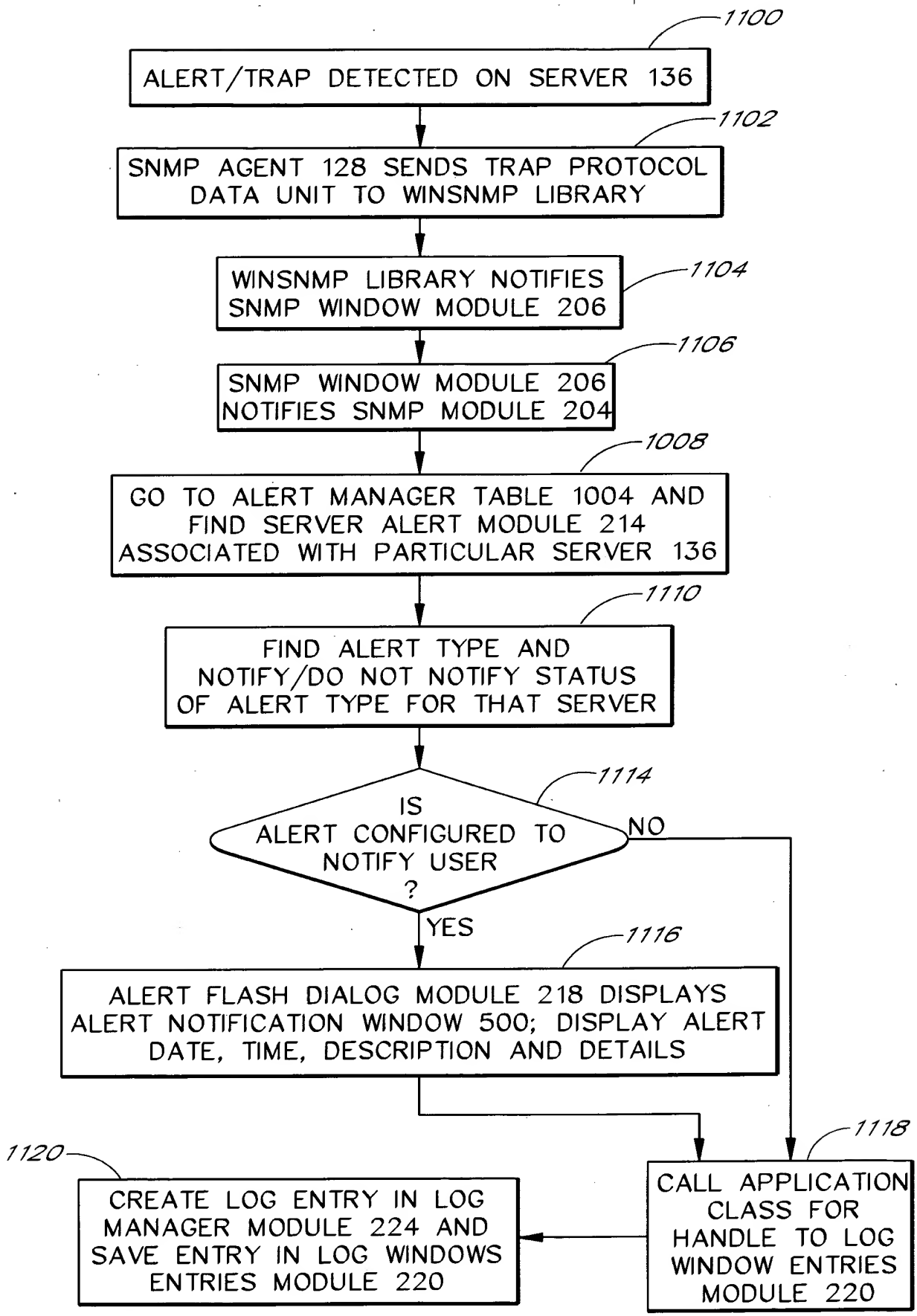

1100
ALERT/TRAP DETECTED ON SERVER 136
1102
SNMP AGENT 128 SENDS TRAP PROTOCOL DATA UNIT TO WINSNMP LIBRARY
WINSNMP LIBRARY NOTIFIES SNMP WINDOW MODULE 206
1104
SNMP WINDOW MODULE 206 NOTIFIES SNMP MODULE 204
1106
GO TO ALERT MANAGER TABLE 1004 AND FIND SERVER ALERT MODULE 214 ASSOCIATED WITH PARTICULAR SERVER 136
1008
FIND ALERT TYPE AND NOTIFY/DO NOT NOTIFY STATUS OF ALERT TYPE FOR THAT SERVER
1110
IS ALERT CONFIGURED TO NOTIFY USER ?
1114
NO
YES
ALERT FLASH DIALOG MODULE 218 DISPLAYS ALERT NOTIFICATION WINDOW 500; DISPLAY ALERT DATE, TIME, DESCRIPTION AND DETAILS
1116
CALL APPLICATION CLASS FOR HANDLE TO LOG WINDOW ENTRIES MODULE 220
1118
CREATE LOG ENTRY IN LOG MANAGER MODULE 224 AND SAVE ENTRY IN LOG WINDOWS ENTRIES MODULE 220
1120

FIG. 11

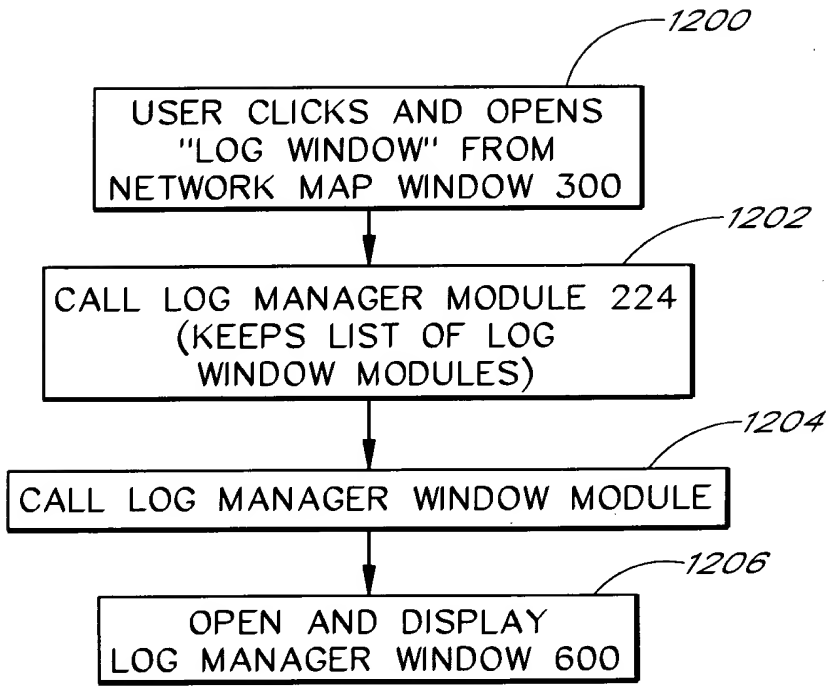

1200
USER CLICKS AND OPENS "LOG WINDOW" FROM NETWORK MAP WINDOW 300
1202
CALL LOG MANAGER MODULE 224 (KEEPS LIST OF LOG WINDOW MODULES)
1204
CALL LOG MANAGER WINDOW MODULE
1206
OPEN AND DISPLAY LOG MANAGER WINDOW 600

FIG. 12